



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D205-634-145

Job Sheet 171292



Part No: D205-634-145

Job Qty: 1 ea

Part Name: Replacement Skidtube with Thru-Bolt Standard Wearplates Fits LH or RH



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 1/30/18

Job Tracking No:

Due Date: 2/5/18

Created By: Michelle Gagnon-Donovan

Type: Stock

Description:

Note: DWG D2580-049 REV H, IIN-D205-634 REV I IPP REV:B 14.04.21 NEW ISSUE DD VERF:JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea		2/2/18	0.00	0.00	Start Up Skidtube-1		M6A
110	Skidtube	1 pcs		2/3/18	0.00	2.01	Skidtube-2		M6A
120	CNC Bend Skidtube	1 pcs		2/3/18	0.49	0.60	CNC Bend Skidtube		M6A 25
130	Skidtube	1 pcs		2/3/18	0.00	2.01	Skidtube-2		38
140	QC	1 pcs		2/3/18	0.00	0.00	QC5		38
150	Skidtube	1 pcs		2/3/18	0.00	2.01	Skidtube-2		38 BE M6A
160	QC	1 pcs		2/3/18	0.00	0.00	QC10		38 DAS
170	QC	1 pcs		2/3/18	0.00	0.00	QC5		38
180	HandFinish	1 pcs		2/3/18	0.00	1.07	HandFinish2		SA 18-04-08
190	Powdercoat	1 pcs		2/3/18	0.00	0.18	Powdercoat1		BR/ SA 18-04-12
200	QC	1 pcs		2/3/18	0.00	0.00	QC3		M 18-5-08
210	HandFinish	1 pcs		2/5/18	0.00	1.07	HandFinish4		DAS
220	QC	1 pcs		2/5/18	0.00	0.00	QC5		38
225	DC	1 pcs		2/5/18	0.00	0.00	DC		9-85
230	Packaging	1 pcs		2/5/18	0.00	0.00	Packaging3-1		SMB
240	QC21-FG	1 Ea		2/5/18	0.00	0.00	QC21		met 18/05/11

Part Op 110 - 1- PICK D2580-1 2- SPOT DRILL 2 AFT RUN ON WEARPLATE HOLES USING DT10021, DRILL 3.630" HOLES
Descriptions: USING DT8462 (83.94" FROM AFT OF D2580-1 REF. ONLY)

120 - 1-Bend as per program D2580 SKID on CNC Bender and Folio FT 16 2-Cut tubes as per Dwg. D2580 3- Scribe batch# in aft end of tube

130 - 1-Deburr ends after cutting and remove bending marks. Prepare tube for welding D2576-3 step remove alodine as required. 2-Locating from most fwd saddle hole, drill most fwd wearplate hole using DT9793 (10.832 REF) as per dwg D2580 sheet 7. 3-Open run-on wearplate holes to finished size 0.508" at locations (5.338/ 5.985/ 10.832/ 3.63 REF) as per dwg D2580 sheet 7. 4-Drill pilot holes for aft cap using DT8215, Open to finished size.

150 - 1-Weld step D2576 as per Dwg. D2580 and QSI 004 A/R Aluminum Rod 0.50611. Grind welds flush. 2-Touch up alodine on run on wearplate holes prior to swaging 3- Insert D4202-1 spacer, swage as per QSI002 and trim/ grind flush per QSI002 and as per dwg 4-DRILL TOWING HOLE USING DT8091 5-DEBURR

180 - Realodine tube as per QSI 005

190 - START TIME: 9:10 OVEN TEMPERATURE: 320° FINISH TIME: 9:40

210 - 1-Install inserts & wearplates as per Dwg. D2580. Use a drop of Sikaflex on insert holes before installing wearplates A/R Sikaflex-291 18/04/11 Sikaflex expire date: 18/04/22 2-Coat D2594-3 O rings with

220 - Inspect Aft Cap, Fwd Step and Wing Walk of work to Current Step Inspect for Foreign objects per QSI 024

225 - Photocopy D205-634 bluefile & type labels per PPP D205-634-145 CHG001

230 - Identify and pack for shipping as per PPPD205-634-145 Location : FG073

Wing Walk

A 18765 M138851

Job BOM				
Part / Item	Component Name	Quantity	Operation	Container
D2580-1	205 Bent Tube	1 Ea (1 ea)	90-Start up Operation	5053988
AN3-5A	Bolt	2 Ea (2 ea)	210-HandFinish	
AN4-45A	Bolt	8 Ea (8 ea)	210-HandFinish	
D2570	Bushing	16 Ea (16 ea)	210-HandFinish	
D2576-3	Step (Machining Detail)	1 Ea (1 ea)	210-HandFinish	8156023
D2594-1	Plug	8 Ea (8 ea)	210-HandFinish	
D2594-3	O-Ring	8 Ea (8 ea)	210-HandFinish	
D2855	Cap	1 Ea (1 ea)	210-HandFinish	
D4202-1	Spacer	24 Ea (24 ea)	210-HandFinish	5039216
D5061-1	Fwd Wearplate	1 Ea (1 ea)	210-HandFinish	
D5061-3	Aft Wearplate	1 Ea (1 ea)	210-HandFinish	
MS21042-4	Nut	8 Ea (8 ea)	210-HandFinish	
NAS1149D0332J	Washer	2 Ea (2 ea)	210-HandFinish	

Job Allocations				
Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D2580-1	1	5	0
210-HandFinish	AN3-5A <i>5041106</i>	2	263	0
	AN4-45A <i>FM13771242</i>	8	110	0
	D2570 <i>5046933x13</i>	16	388	0
	D2576-3 <i>5054786</i>	1	45	0
	D2594-1 <i>5054786</i>	8	428	0
	D2594-3 <i>5049975</i>	8	581	0
	D2855 <i>F147805</i>	1	74	0
	D4202-1 <i>5054565</i>	24	959	0
	D5061-1 <i>5054563</i>	1	3	0
	D5061-3 <i>5054563</i>	1	3	0
	MS21042-4 <i>5038763</i>	8	203	0
	NAS1149D0332J <i>5020606</i>	2	4,012	0

Part Specifications
Specifications could not be found.

Plex 2/7/18 8:53 AM Dart.Gagnon.Michelle

Dart Aerospace Ltd.
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Hawkesbury, ON K6A 1K7
CANADA
TEL: 1 813 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Date: 03/29/18



Container No: S056271

Part: D205-634-145

Job No: 171292

Serial No/Batch: S056271

Revision:
Inspector:

003101

ITEM	QTY -041	QTY -043	QTY -047	QTY -049	PART NUMBER	DESCRIPTION
1	X				D2580-041	SKIDTUBE ASSEMBLY
2		X			D2580-043	SKIDTUBE ASSEMBLY
3			X		D2580-047	SKIDTUBE ASSEMBLY
4				X	D2580-049	SKIDTUBE ASSEMBLY
20	1	1	1	1	D2580-1-180	EXTRUSION
21			18	18	D2670	BUSHING
22	1	1	1	1	D2578-3	STEP
23		4			D2579	SPACER
24	18	18	8	8	D2584-1	PLUG
25	18	18	8	8	D2584-3	O-RING
26	1	1	1	1	D2596	205 WEB
27	1	1	1	1	D2585	AFT CAP
28	1	1			D3584-5	WEARSHOE
29	1	1			D3584-6	WEARSHOE
30	1	1			D3584-11	WEARSHOE
31	1	1			D3584-13	WEARSHOE
32	20	20	24	24	D4202-1	SPACER
33			1		D4406-041	WEARPLATE ASSEMBLY
34			1		D4406-043	WEARPLATE ASSEMBLY
35				1	D5081-1	FWD WEARPLATE
36				1	D5081-3	AFT WEARPLATE
50	50	50			ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
51	50	50			ANSC4A	BOLT
52	2	2	2	2	AN3-5A	BOLT
53			8	8	AN4-45A	BOLT
54	50	50			NAS1149C0332R	WASHER (AN980C10L)
55	2	2	2	2	NAS1149D0332J	WASHER (AN980JD10L)
56			8	8	MS21042-4	NUT (OR MS21042L4)

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 171292

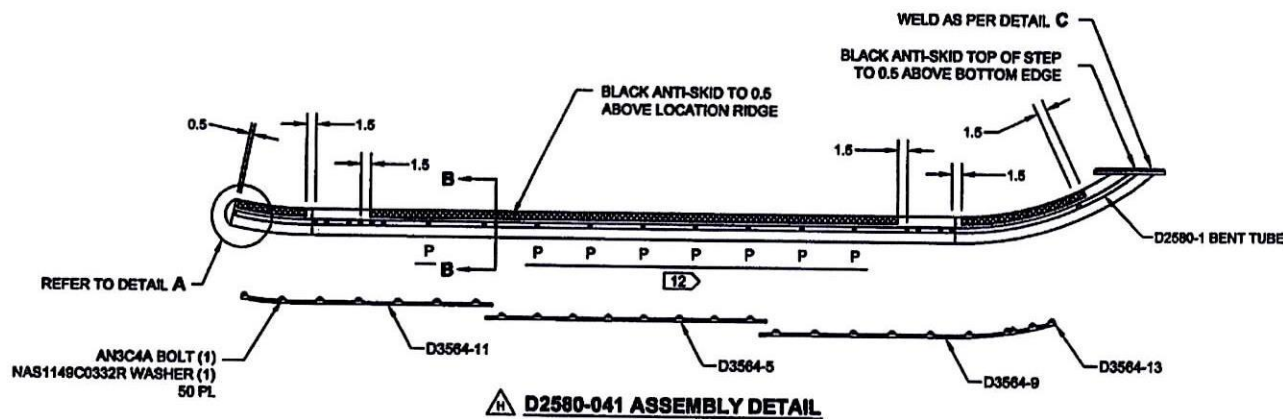
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GENERAL NOTES:

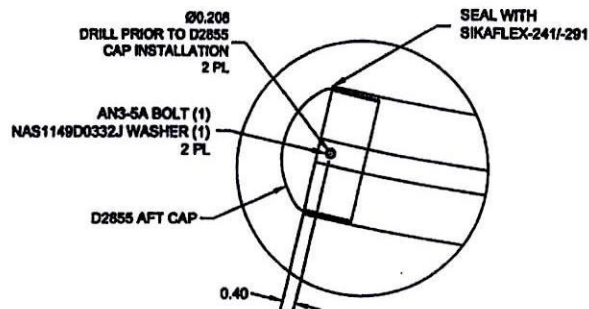
- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB
POWDER COAT (-041/-047/-049) GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
POWDER COAT (-045) GREEN SANDTEX (REF 4.3.5.5) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4.
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: D2580-041 = 33.7 lbs
D2580-043 = 33.7 lbs
D2580-047 = 45.1 lbs
D2580-049 = 32.0 lbs
- 8) WELDING PER DART QSI 004.
- 9) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 10) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 11) USE DART DRILL TEMPLATE DT8217 & DT8837 ONLY FOR D2580-041/-045 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTIONS B-B AND F-F (50 PLACES) AFTER FINISH. INSTALL ANSC4A BOLTS AND NAS1149C0332R WASHERS WITH SIKAFLEX-241-291.
- 12) INSERT D2594-1 PLUG C/W D2584-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (18 PLACES FOR D2580-041/-045 AND 8 PLACES FOR D2580-047/-049)
- 13) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2585 AFT CAP TO PREVENT INTERFERENCE WITH THE SPACER AT THIS LOCATION

H	SHEET: PL DELETE D3586-1/-5/-13 GASKETS, WEIGHTS UPDATED ACCORDINGLY. SHEETS 2 & 4 PICTORIAL UPDATE FOR REMOVAL OF GASKETS	SAD	17.06.09
G	ADDED -049, -047 WEIGHT UPDATED PER DSI 9986	AJS	14.04.09
F	INCORPORATE DEO D2580-E-1 PER PART12-218	DC	13.06.20
E	ADD D2580-047 (ZN C4-7) AND D2580-7 (ZN B3-8); INCLUDED DEO D2580-D-1; REFORMATTED DRAWING TO CURRENT STANDARDS; DT8217 & DT8837 WAS TD2577-205 (ZN C4-1)	RF	11.06.21
D	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/ 9183	PH	07.04.05
C	REDRAWN, INCLUDED DEO 9094/ 9097	CP	06.06.28
B	AS MANUFACTURED	DS	06.12.02
A	NEW ISSUE	DS	06.06.16
REV.	DESCRIPTION	BY	DATE
DESIGN	DS		
DRAWN	SAD		
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APPROVED	<i>[Signature]</i>		
DE APPR.	<i>[Signature]</i>		
DATE	17.06.09		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D2580 REV. H SHEET 1 OF 9 TITLE 205 SKIDTUBE ASSEMBLY SCALE NTS COPYRIGHT © 1996 BY DART AEROSPACE LTD THIS DOCUMENT IS UNCLASSIFIED AND IS AVAILABLE ON THE INTERNET. IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED WITHOUT DART AEROSPACE LTD'S PERMISSION.			

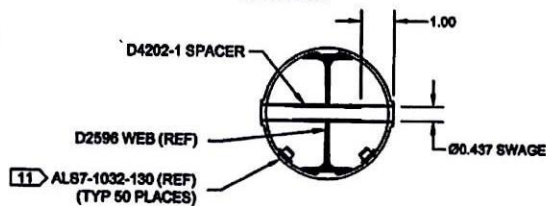
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DETAIL A
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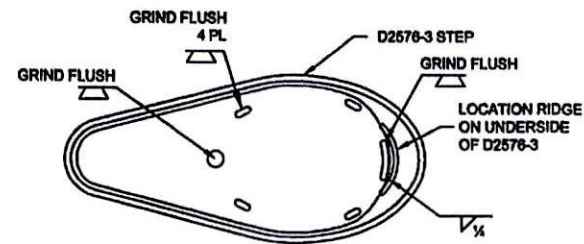


SECTION B-B
SCALE 5X



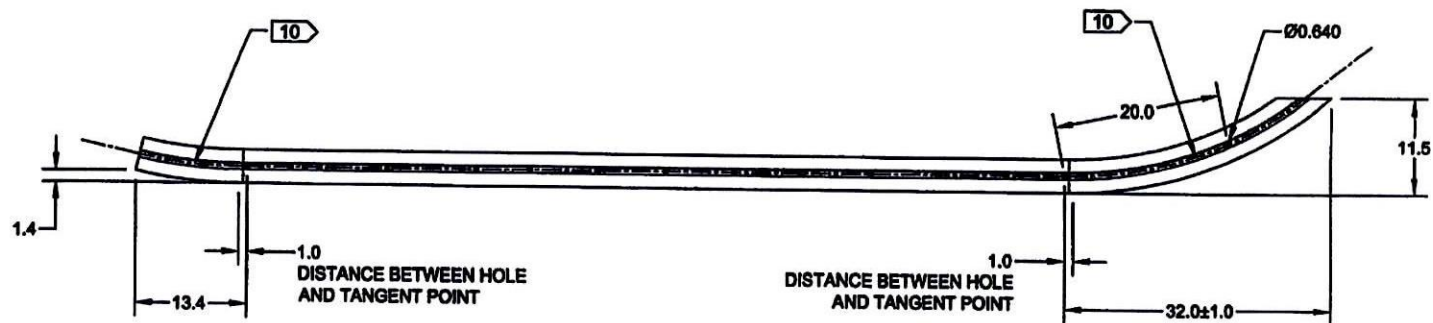
AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:
1. INSERT D4202-1 SPACER (20 PLACES)
2. SWAGE TO Ø0.437 X 1.00 DEEP PER QSI 002
3. TRIM / GRIND FLUSH PER QSI 002

DETAIL C
SCALE 5X



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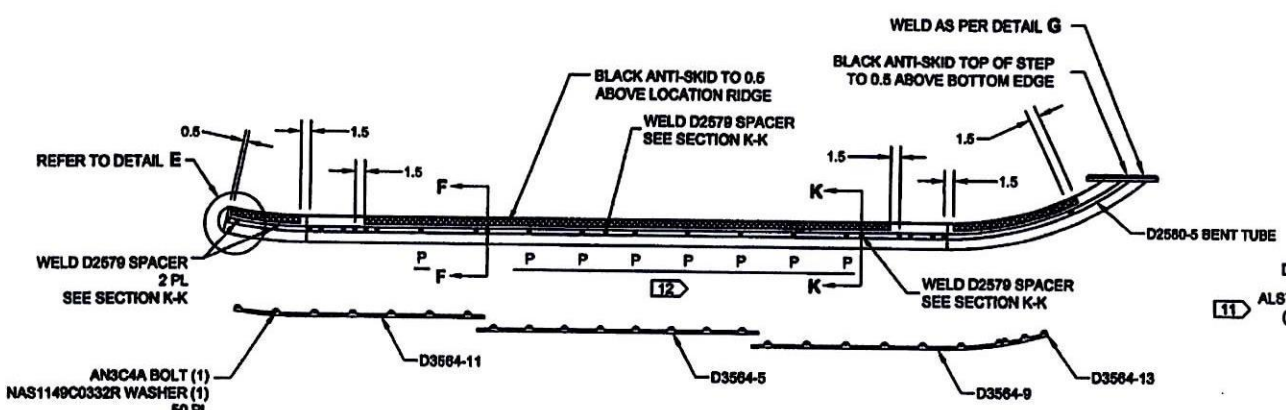
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D2580-1 BENT TUBE
(MAKE FROM D2580-101 TUBE)

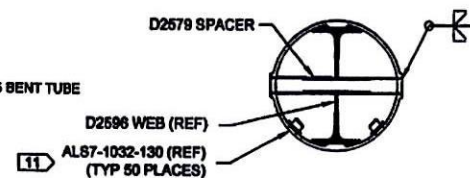
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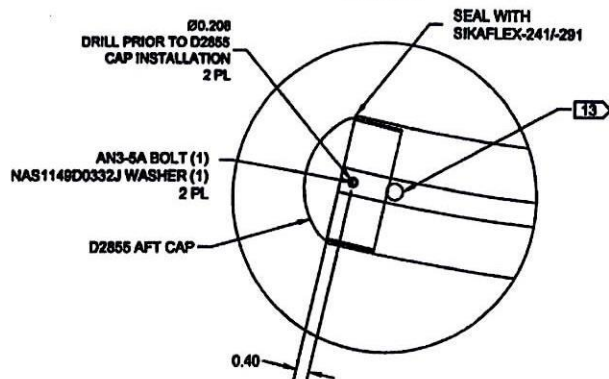
D2580-045 ASSEMBLY DETAIL

**SECTION K-K
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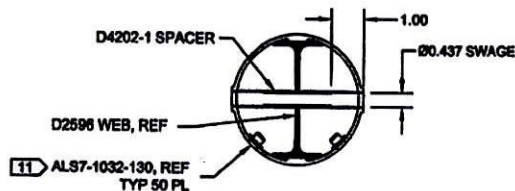
AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:
1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (4 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. DO NOT C-BORE

**DETAIL E
SCALE 5X**



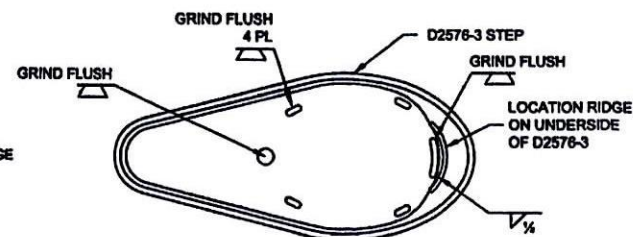
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**SECTION F-F
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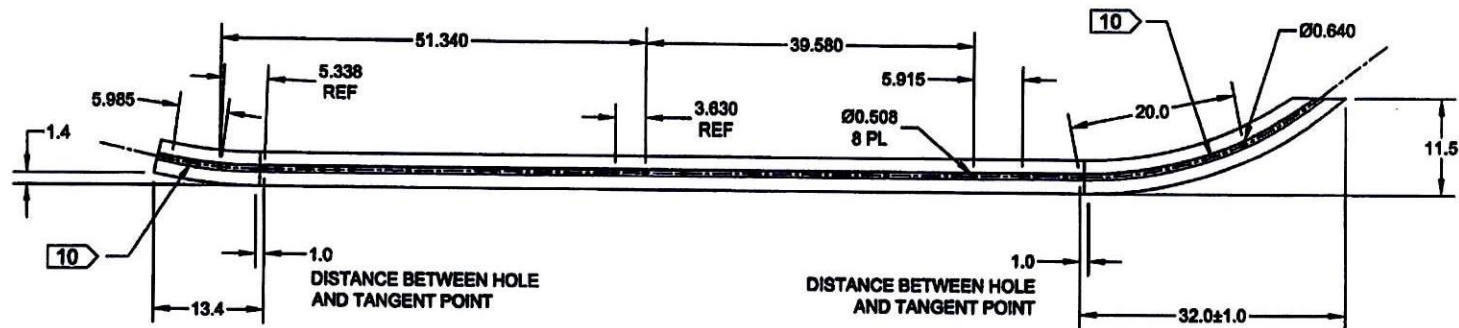


AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:
1. INSERT D4202-1 SPACER (20 PLACES)
2. SWAGE TO Ø0.437 X 1.00 DEEP PER QSI 002
3. TRIM/GRIND FLUSH PER QSI 002

**DETAIL G
SCALE 5X**



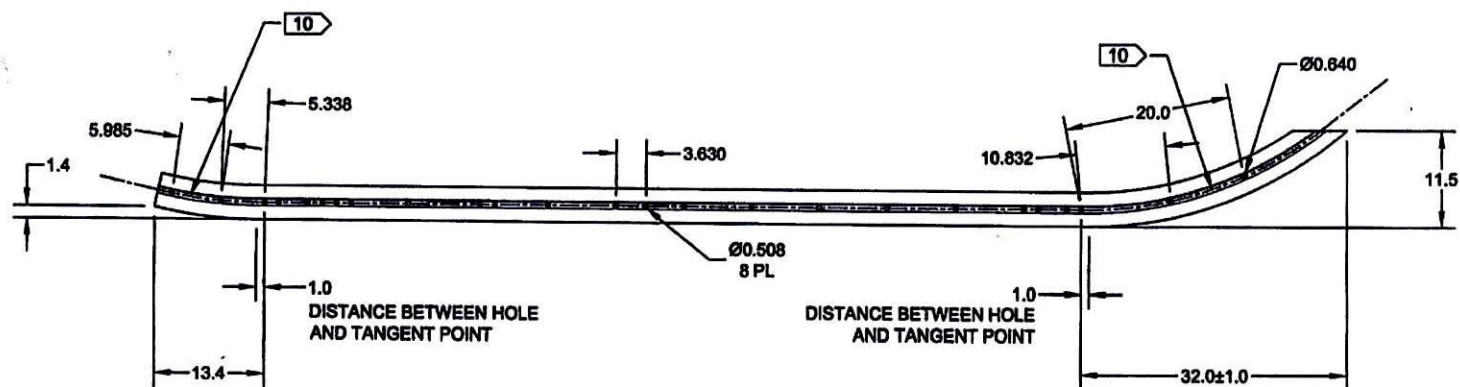
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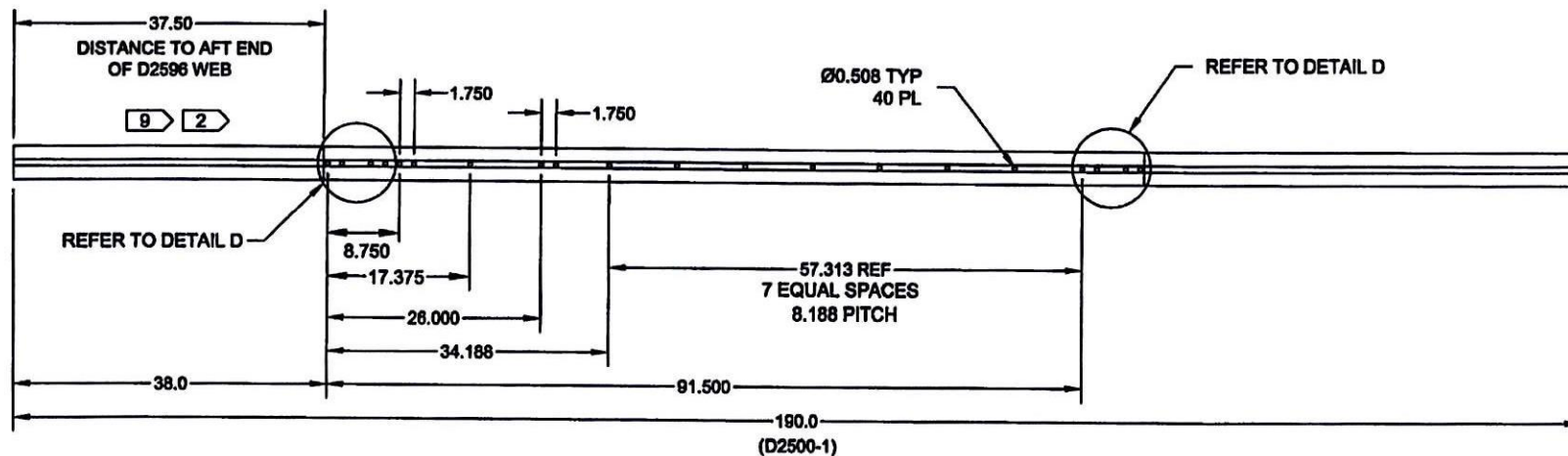


D2580-7 BENT TUBE
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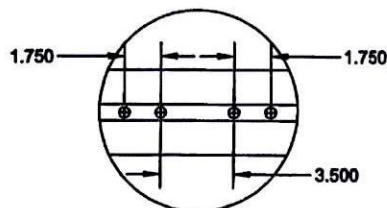
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D2580-101 TUBE



DETAIL D
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8 7 6 5 4 3 2 1

Change Record

PAGE 1 OF 1

Part Number: D205-634-145

Description: REPLACEMENT SKIDTUBE w/ THRU BOLT WEARPLATES

[illegible]

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					